IN THE CLAIMS:

Claims 1-16 have been previously cancelled.

17. (currently amended) A device for variable actuation of gas exchange valves of internal combustion engines with a plurality of cylinders, comprising: a camshaft with at least one cam; a housing, said camshaft being mounted in said housing and rotating as a function of engine speed; a connecting link and a first curved link, said connecting link being actuatable by said cam through said first curved link; a driven element for transferring motion to said gas exchange valves and connected to said connecting link; at least one other curved link between said connecting link and said driven element, said other curved link having a first section in which no lifting motion for said gas exchange valves is transferred through said driven element, said curved link having a second section in which lifting motion for said gas exchange valves is transferred through said driven element with the capability of displacing at least one transmission element along a displacement path and modifying thereby the course of a lifting curve of said gas exchange valves; a plurality of displacement units, gas exchange valves of one cylinder in one of said displacement units being displaced together ~~with~~ and independently of displacement units of other cylinders; separate actuators for each displacement unit for operating said displacement unit; rotational angle sensors for capturing rotational angle signals of a crankshaft and camshaft or another shaft running at half the crankshaft speed for deriving a common resting phase of all valves of a cylinder to be adjusted in common; and a control unit for displacing each displacement unit during said common resting ~~place~~ phase.

18. (currently amended) A device for variable actuation of gas exchange valves of internal combustion engines with a plurality of

cylinders, comprising: a housing; a camshaft with at least one cam mounted in said housing and rotating as a function of engine speed; a connecting link and a first curved link, said connecting link being actuatable by said cam through said first curved link; a driven element for transferring motion to said gas exchange valves and connected to said connecting link; at least one other curved link between said connecting link and said driven element, said other curved link having a first section in which no lifting motion for said gas exchange valves is transferred through said driven element, said curved link having a second section in which lifting for said gas exchange valves is transferred through said driven element with the capability of displacing at least one transmission element along a displacement path and modifying thereby the course of a lifting curve of said gas exchange valves;

a plurality of displacement units to affect lifting motion of said gas exchange valves, at least one of said displacement units carrying out displacement to affect lifting motion of at least one gas exchange valve independently of displacement of other displacement units;

a common adjusting shaft and at least one cam disk per displacement unit for adjusting on said displacement path respective required positions of ~~said~~ transmission elements by said cam disk for a number of gas exchange valves, said transmission elements being supportable in direction of displacement;

said cam ~~shaft~~ disk ~~being a rest for~~ causing no change in position of said transmission elements guided on said displacement path when said adjusting shaft is rotated;

and a cam disk on at least one other displacement unit ~~having a corresponding rest~~ causing a change in position of said transmission elements guided on said displacement path when said adjusting shaft is rotated.

19. (currently amended) A device as defined in claim 18, wherein ~~said section without a root of~~ said cam disk has as sector having an adjusting cam curve leading continuously to a smaller distance to a center of rotation of said adjusting shaft.

20. (previously presented) A device as defined in claim 19, wherein said cam disk has a contour with a second sector arranged adjacent to said first-mentioned sector and having an adjusting cam curve such that valves of a cylinder actuated when said second sector becomes active remain constantly closed, said cam disk having a contour with a corresponding second sector with a contour curve such that valves of a cylinder actuated when said corresponding second sector becomes active still execute a lift.

21. (previously presented) A device as defined in claim 18, wherein said adjusting shaft has a plurality of first identical cam disks and a plurality of second identical cam disks arranged thereon, each of said first identical cam disks and of said second identical cam disks being oriented so that they have the same angular position to one another and are thereby not rotated with respect to one another.

22. (previously presented) A device as defined in claim 17, wherein two identical cams and two connecting links with identical cams comprise two valves of a cylinder.

23. (previously presented) A device as defined in claim 17, wherein two different cams and two connecting links with different radial cams comprise two valves of a cylinder.

24. (previously presented) A device as defined in claim 17, wherein two identical cams and two connecting links with different radial cams comprise two valves of a cylinder.

25. (previously presented) A device as defined in claim 17, wherein two different cams and two connecting links with identical radial cams comprise two valves of a cylinder.

26. (previously presented) A device as defined in claim 17, wherein a common connecting link together with two identical radial cams comprise intake or exhaust valves of a cylinder.

27. (previously presented) A device as defined in claim 17, wherein a common connecting link together with two different radial cams comprise said valves.

28. (previously presented) A device as defined in claim 17, wherein at least one valve is adjusted to be closed constantly.

29. (previously presented) A device as defined in claim 17, wherein all intake or exhaust valves of a cylinder are combined in a displacement unit.

30. (previously presented) A process for operating an internal combustion engine with a plurality of cylinders with the device of claim 17, and after a desired load state for the engine is reached, comprising the steps of:

(a) picking up angular position signals of the crankshaft with a first rotational angle sensor on a flywheel and evaluating said signals by an engine management system for detecting rotational irregularities of the crankshaft and torque peaks;

(b) assigning said angular position signals to individual cylinders by a second rotational angle sensor arranged on the camshaft rotating at half the crankshaft speed; and

(c) producing signals going to drives for individual displacement units to smooth out torque peaks and crankshaft speed by correcting valves strokes of cylinders with smaller

torques upward and correcting cylinders with larger torques downward.

31. (previously presented) A process for operating an internal combustion engine with a plurality of cylinders with the device of claim 17, comprising the steps of:

(a) assigning each cylinder to a separate one of said device and an actuator to operate the device;

(b) determining phase position of rest phases of individual valves operated by an actuator; and

(c) applying adjustment movement of respective devices during common rest phases of valves operated by a respective displacement unit.

32. (previously presented) The process as defined in claim 31, wherein phase position of rest phases of individual valves is determined by an engine management system from a signal of a rotational angle sensor arranged on the camshaft.